AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior versions, and listings, of claims in the Application.

Listing of Claims:

Claims 1-21 (Canceled).

Claim 22. (Currently amended) A portable terminal device supporting voice communication via a wireless packet network, the portable terminal device comprising:

a microphone for transducing sound into a first analog voice stream;

at least one converter for converting the first analog voice stream to produce digital voice packets;

a transmitter for transmitting, via the wireless packet network, the digital voice packets from the at least one converter;

a receiver for receiving digital voice packets from a base station serving a plurality of portable terminal devices in the wireless packet network;

the at least one converter for converting received digital voice packets to a second analog voice stream;

a transducer for transducing the second analog voice stream into sound;

wherein the ~~portable terminal device transmits~~ transmitter is arranged to send, to a first remote ~~system~~ system, a request for information identifying a second remote system accessible to the portable terminal device via the wireless packet network and operable to, at least, convert between digital voice packets of the portable terminal device and voice signals compatible with a public telephone network;

wherein the ~~portable terminal device, upon receiving~~ receiver is arranged to receive the requested ~~information,~~ information;

wherein the transmitter is arranged to send ~~sends~~ a message[[,]] identifying a subscriber on the public telephone network, to the second remote system, to initiate a

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call connection through the second remote system to the subscriber on the public telephone network, using the requested information;

wherein the receiver is arranged to receive a message indicating establishment of the call connection with the subscriber; and

wherein the ~~portable terminal device begins communicating~~ transmitter is arranged to communicate digital voice packets to the second remote system upon ~~receiving a~~ receipt, by the receiver, of the message indicating establishment of [[a]] the call connection with the subscriber.

Claim 23. (Previously presented) The device of claim 22 wherein the wireless packet network communicates using an Internet protocol (IP).

Claim 24. (Previously presented) The device of claim 23 wherein the wireless packet network communicates using transmission control protocol (TCP) over Internet protocol (IP).

Claim 25. (Previously Presented) The device of claim 22 wherein the wireless packet network communicates at a frequency of approximately 2.4 gigahertz.

Claim 26. (Previously Presented) The device of claim 22 wherein the wireless packet network communicates using a frequency hopping spread spectrum technique.

Claim 27. (Previously Presented) The device of claim 22 wherein the wireless packet network communicates using a direct sequence spread spectrum technique.

Claim 28. (Previously Presented) The device of claim 22 wherein the at least one converter comprises:

an analog to digital converter for converting the first analog voice stream to digital voice data; and

a packetizer for assembling the digital voice data to produce digital voice packets.

Claim 29. (Previously Presented) The device of claim 22 wherein the at least one converter comprises:

a depacketizer for extracting digital voice data from received digital voice packets; and

a digital to analog converter for converting the extracted digital voice data to produce the second analog voice stream.

Claim 30. (Currently amended) One or more circuits for a portable terminal device supporting voice communication via a wireless packet network, the one or more circuits comprising:

at least one converter for converting a first analog voice stream to produce digital voice packets;

a transmitter for transmitting, via the wireless packet network, the digital voice packets from the at least one converter;

a receiver for receiving digital voice packets from a base station serving a plurality of portable terminal devices in the wireless packet network;

the at least one converter for converting received digital voice packets to a second analog voice stream;

wherein the ~~portable terminal device transmits~~ transmitter is arranged to send, to a first remote ~~system~~ system, a request for information identifying a second remote system accessible to the portable terminal device via the wireless packet network and operable to, at least, convert between digital voice packets of the portable terminal device and voice signals compatible with a public telephone network;

wherein the ~~portable terminal device, upon receiving~~ receiver is arranged to receive the requested ~~information,~~ information;

wherein the transmitter is arranged to send ~~sends~~ a message identifying a subscriber on the public telephone network, to the second remote system, to initiate a call connection through the second remote system to the subscriber on the public telephone network, using the requested information;

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wherein the receiver is arranged to receive a message indicating establishment of the call connection with the subscriber; and

wherein the ~~portable terminal device begins communicating~~ transmitter is arranged to communicate digital voice packets to the second remote system upon ~~receiving a~~ receipt, by the receiver, of the message indicating establishment of [[a]] the call connection with the subscriber.

Claim 31. (Previously presented) The one or more circuits of claim 30 wherein the wireless packet network communicates at a frequency of approximately 2.4igahertz.

Claim 32. (Previously presented) The one or more circuits of claim 30 wherein the wireless packet network communicates using an Internet protocol.

Claim 33. (Previously presented) The one or more circuits of claim 30 wherein the wireless packet network communicates using transmission control protocol (TCP) over Internet protocol (IP).

Claim 34. (Previously presented) The one or more circuits of claim 30 further comprising:
a microphone for transducing sound into the first analog voice stream.

Claim 35. (Cancelled)

Claim 36. (Previously presented) The one or more circuits of claim 30 further comprising:
a transducer for converting the second analog voice stream into sound.

Claim 37. (Previously presented) The one or more circuits of claim 30 further comprising:
a keypad for receiving user input.

Claim 38. (Previously presented) The one or more circuits of claim 30 further comprising:

a display device to provide visual feedback to a user.

Claims 39-53. (Cancelled)

Claim 54. (Previously presented) A method of operating a portable terminal device for supporting voice communication via a wireless packet network, the method comprising:

transmitting, to a first remote system from the portable terminal device via the wireless packet network, a request for information identifying a second remote system accessible to the portable terminal device via the wireless packet network and operable to, at least, convert between digital voice packets of the portable terminal device and voice signals compatible with a public telephone network;

upon receiving the requested information, sending a message identifying a subscriber on the public telephone network, to the second remote system, to initiate a call connection through the second remote system to the subscriber on the public telephone network, using the requested information;

evaluating a message wirelessly received from the wireless packet network;

sending an indication of a data rate based upon the evaluation;

receiving digital voice packets via the wireless packet network at a data rate;

initiating conversion of the received digital voice packets to produce sound;

enabling conversion of sound to digitized voice information;

creating digital voice packets from the digitized voice information; and

upon receiving a message indicating establishment of a call connection with the subscriber, begin sending the created digital voice packets to the second remote system via the wireless packet network.

Claim 55. (Previously Presented) The method of claim 54 wherein the wireless packet network communicates at a frequency of approximately 2.4 gigahertz.

Claim 56. (Previously Presented) The method of claim 54 wherein the wireless packet network communicates using a frequency hopping spread spectrum technique.

Claim 57. (Previously Presented) The method of claim 54 wherein the wireless packet network communicates using a direct sequence spread spectrum technique.

Claim 58. (Previously Presented) The method of claim 54 wherein the wireless packet network communicates using an Internet protocol.

Claim 59. (Previously presented) The method of claim 58 wherein the wireless packet network communicates using transmission control protocol (TCP) over Internet protocol (IP).

Claims 60-77. (Cancelled)

Claim 78. (Previously presented) A system for use in a portable terminal device supporting voice communication via a wireless packet network the system comprising:

at least one processor arranged to communicate over the wireless packet network, the at least one processor operable to, at least:

transmit, to a first remote system via the wireless packet network, a request for information identifying a second remote system accessible to the at least one processor via the wireless packet network and operable to, at least, convert between digital voice packets of the portable terminal device and voice signals compatible with a public telephone network;

upon receiving the requested information, sending a message identifying a subscriber on the public telephone network, to the second remote system, to initiate a call connection through the second remote system to the subscriber on the public telephone network, using the requested information;

evaluate a message wirelessly received from the wireless packet network;

send an indication of a data rate based upon the evaluation;

receive digital voice packets via the wireless packet network at a data

rate;

initiate conversion of the received digital voice packets to produce sound;

enable conversion of sound to digitized voice information;

create digital voice packets from the digitized voice information; and

upon receiving a message indicating establishment of a call connection

with the subscriber, begin sending the created digital voice packets to the second

remote system, via the wireless packet network.

Claim 79. (Previously presented) The system of claim 78 wherein the wireless

packet network communicates at a frequency of approximately 2.4 gigahertz.

Claim 80. (Previously presented) The system of claim 78 wherein the wireless

packet network communicates using a frequency hopping spread spectrum technique.

Claim 81. (Previously presented) The system of claim 78 wherein the wireless

packet network communicates using a direct sequence spread spectrum technique.

Claim 82. (Previously presented) The system of claim 78 wherein the wireless

packet network communicates using an Internet protocol.

Claim 83. (Previously presented) The system of claim 82 wherein the wireless

packet network communicates using transmission control protocol (TCP) over Internet

protocol (IP).

Claim 84. (Previously presented) The system of claim 78 wherein the evaluated

message is received periodically via the wireless packet network.

Claim 85. (Previously presented) The system of claim 84 wherein the message

received periodically is a polling message.

Claim 86. (Previously presented) The system of claim 78 wherein the evaluating evaluates reception of a message preamble.

Claim 87-92. (Cancelled)

Claim 93. (Previously presented) The method of claim 54 wherein the evaluation evaluates reception of a message received periodically via the wireless packet network.

Claim 94. (Previously presented) The method of claim 93 wherein the message received periodically is a polling message.

Claim 95. (Previously presented) The method of claim 54 wherein the evaluation evaluates reception of a message preamble.

Claim 96. (Withdrawn) A system for use in a portable terminal device, the system comprising:

at least one processor that decodes digital signals received and encodes digital signals for transmission via a wireless packet network, the at least one processor operating to, at least:

evaluate a message received wirelessly from a base station serving a plurality of portable terminal devices of the wireless packet network to determine wireless communication conditions;

send, to the base station via the wireless packet network, a message indicative of a data rate based upon the evaluation;

receive packets of digital information from the base station via the wireless packet network at a data rate selected by the base station in response to the message indicative of a data rate; and

transmit, via the wireless packet network, digital voice packets created from digitized voice information received over a short range wireless link separate from the wireless packet network.

Claim 97. (Withdrawn) The system of claim 96 wherein each received packet of digital information occupies the entire capacity of a radio frequency channel during delivery.

Claim 98. (Withdrawn) The system of claim 96 wherein each packet of digital information received by the at least one processor occupies a portion of one of a sequence of fixed length time intervals.

Claim 99. (Withdrawn) The system of claim 98 wherein the position of the portion within the fixed length time interval is determined by the base station separately for each of the sequence of fixed length time intervals.

Claim 100. (Withdrawn) The system of claim 99 wherein each fixed length time interval is between approximately 10 milliseconds and approximately 20 milliseconds in length.

Claim 101. (Withdrawn) The system of claim 96 wherein the data rate selected by the base station corresponds to the data rate indicated by the message indicative of a data rate sent by the at least one processor.

Claim 102. (Withdrawn) The system of claim 96 wherein communication over the wireless packet network shares a single radio frequency channel.

Claim 103. (Withdrawn) The system of claim 96 wherein the received message evaluated by the at least one processor is a periodic transmission of the base station.

Claim 104. (Withdrawn) The system of claim 103 wherein the received message evaluated by the at least one processor is a polling message.

Claim 105. (Withdrawn) The system of claim 96 wherein the communication conditions comprise one or both of a signal strength and/or acceptable reception of a message transmitted by the base station.

Claim 106. (Withdrawn) The system of claim 96 wherein the digital information is digitized voice.

Claim 107. (Withdrawn) The system of claim 96 wherein the at least one processor operates to, at least:

act as a master device in an exchange of digital information with a slave device, via a second wireless packet network having a shorter range than the wireless packet network.

Claim 108. (Withdrawn) The system of claim 96 wherein the at least one processor operates to, at least:

receive image data from an image capture device; and

process the image data for transmission to the base station via the wireless packet network.

Claim 109. (Withdrawn) A method of operating at least one processor in a portable terminal device, the method comprising:

evaluating a message received wirelessly from a base station serving a plurality of portable terminal devices of the wireless packet network to determine wireless communication conditions;

sending, to the base station via the wireless packet network, a message indicative of a data rate based upon the evaluation;

receiving packets of digital information from the base station via the wireless packet network at a data rate selected by the base station in response to the message indicative of a data rate; and

transmitting, via the wireless packet network, digital voice packets created from digitized voice information received over a short range wireless link separate from the wireless packet network.

Claim 110. (Withdrawn) The method of claim 109 wherein each received packet of digital information occupies the entire capacity of a radio frequency channel during delivery.

Claim 111. (Withdrawn) The method of claim 96 wherein each packet of digital information received by the at least one processor occupies a portion of one of a sequence of fixed length time intervals.

Claim 112. (Withdrawn) The method of claim 111 wherein the position of the portion within the fixed length time interval is determined by the base station separately for each of the sequence of fixed length time intervals.

Claim 113 (Withdrawn) The method of claim 112 wherein each fixed length time interval is between approximately 10 milliseconds and approximately 20 milliseconds in length.

Claim 114. (Withdrawn) The method of claim 109 wherein the data rate selected by the base station corresponds to the data rate indicated by the message indicative of a data rate sent by the at least processor.

Claim 115. (Withdrawn) The method of claim 109 wherein communication over the wireless packet network shares a single radio frequency channel.

Claim 116. (Withdrawn) The method of claim 113 wherein the received message evaluated by the at least one processor is a periodic transmission of the base station.

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Claim 117. (Withdrawn) The method of claim 116 wherein the received message evaluated by the at least one processor is a polling message.

Claim 118. (Withdrawn) The method of claim 109 wherein the communication conditions comprise one or both of a signal strength and/or acceptable reception of a message transmitted by the base station.

Claim 119. (Withdrawn) The method of claim 109 wherein the digital information is digitized voice.

Claim 120. (Withdrawn) The method of claim 109 wherein the method comprises:

acting as a master device in an exchange of digital information with a slave device, via a second wireless packet network having a shorter range than the wireless packet network.

Claim 121. (Withdrawn) The method of claim 109 wherein the method comprises:

receiving image data from an image capture device; and

processing the image data for transmission to the base station via the wireless packet network.

Claim 122. (Previously presented) The device of claim 22 wherein the portable terminal device communicates with the base station in each of a series of regular time intervals using bandwidth of a shared channel allocated by the base station in response to requests received from the plurality of portable terminal devices for each time interval.

Claim 123. (Cancelled)

Claim 124. (Previously presented) The one or more circuits of claim 30 wherein the circuit communicates with the base station in each of a series of regular time intervals using bandwidth of a shared channel allocated by the base station in response to requests received from the plurality of portable terminal devices for each time interval.

Claim 125. (Cancelled)

Claim 126. (Previously presented) The method of claim 54 wherein the portable terminal device communicates with the base station in each of a series of regular time intervals using bandwidth of a shared channel allocated by the base station in response to requests received from the plurality of portable terminal devices for each time interval.

Claim 127. (Cancelled)

Claim 128. (Previously presented) The system of claim 78 wherein the portable terminal device communicates with the base station in each of a series of regular time intervals using bandwidth of a shared channel allocated by the base station in response to requests received from the plurality of portable terminal devices for each time interval.

Claim 129. (Cancelled)

Claim 130. (Withdrawn) The system of claim 96 wherein the portable terminal device communicates with the base station in each of a series of regular time intervals using bandwidth of the shared channel allocated by the base station in response to requests received from the plurality of portable terminal devices for each time interval.

Claim 131. (Withdrawn) The system of claim 96 wherein short range comprises distances up to approximately 100 feet.

Claim 132. (Withdrawn) The method of claim 109 wherein the portable terminal device communicates with the base station in each of a series of regular time intervals using bandwidth of the shared channel allocated by the base station in response to requests received from the plurality of portable terminal devices for each time interval.

Claim 133. (Withdrawn) The method of claim 109 wherein short range comprises distances up to approximately 100 feet.

Claim 134. (Previously presented) The portable terminal device of claim 22 wherein the portable terminal device buffers the received digital voice packets for a certain period of time before conversion to the second analog voice stream.

Claim 135. (Previously presented) The portable terminal device of claim 134 wherein the certain period of time is determined by the portable terminal device after initiating the call connection through the second remote system to the subscriber on the public telephone network, and before communication of digital voice packets to the second remote system begins.

Claim 136. (Previously presented) The portable terminal device of claim 134 wherein the certain period of time is determined by the portable terminal device during communication of digital voice packets with the second remote system.

Claim 137. (Previously presented) The portable terminal device of claim 22 wherein the portable terminal device offers routing pathways for voice communication to a user of the portable terminal device, using the received information identifying the second remote system.

Claim 138. (Previously presented) The one or more circuits of claim 30 wherein the portable terminal device buffers the received digital voice packets for a certain period of time before conversion to the second analog voice stream.

Claim 139. (Previously presented) The one or more circuits of claim 138 wherein the certain period of time is determined by the portable terminal device after initiating the call connection through the second remote system to the subscriber on the public telephone network, and before communication of digital voice packets to the second remote system begins.

Claim 140. (Previously presented) The one or more circuits of claim 138 wherein the certain period of time is determined by the portable terminal device during communication of digital voice packets with the second remote system.

Claim 141. (Previously presented) The one or more circuits of claim 30 wherein the portable terminal device offers routing pathways for voice communication to a user of the portable terminal device, using the received information identifying the second remote system.

Claim 142. (Previously presented) The method of claim 54 wherein the portable terminal device buffers the received digital voice packets for a certain period of time before conversion to a signal representative of sound.

Claim 143. (Previously presented) The method of claim 142 wherein the certain period of time is determined by the portable terminal device after initiating the call connection through the second remote system to the subscriber on the public telephone network, and before communication of digital voice packets to the second remote system begins.

Claim 144. (Previously presented) The method of claim 142 wherein the certain period of time is determined by the portable terminal device during communication of digital voice packets with the second remote system.

Claim 145. (Previously presented) The method of claim 54 wherein the portable terminal device offers routing pathways for voice communication to a user of the portable terminal device, using the received information identifying the second remote system.

Claim 146. (Previously presented) The system of claim 78 wherein the portable terminal device buffers the received digital voice packets for a certain period of time before conversion to a signal representative of sound.

Claim 147. (Previously presented) The system of claim 146 wherein the certain period of time is determined by the portable terminal device after initiating the call connection through the second remote system to the subscriber on the public telephone network, and before communication of digital voice packets to the second remote system begins.

Claim 148. (Previously presented) The system of claim 146 wherein the certain period of time is determined by the portable terminal device during communication of digital voice packets with the second remote system.

Claim 149. (Previously presented) The system of claim 78 wherein the portable terminal device offers routing pathways for voice communication to a user of the portable terminal device, using the received information identifying the second remote system.